

Kennedy Space Center Roadmap

Goal 1.0 Assure that safe, reliable, efficient and innovative practices and processes are implemented for space flight element integration, processing and launch.		
Define Our Future (A) 2000-2005	Expand Our Horizon (B) 2006-2011	Develop the Frontier (C) 2012-2025
<p>Objective 1.1A Improve safety, reliability and manifest flexibility of Shuttle Processing (D. King) Strategies S1.1.1A - Assure Shuttle flight element processing is planned and performed safely and effectively (D. King) S1.1.2A- Identify and resolve obsolescence and supportability issues (D. King) S1.1.3A - Lead and implement Shuttle processing and ground systems enhancements/upgrades (D. King/K. Payne) S1.1.4A - Provide technical products and implement Shuttle flight systems upgrades (D. King/K. Payne)</p> <p>Objective 1.2A Provide NASA and other government agency customers with optimal value launch services which incorporate “mission success first” actions and minimize cost (B. Bruckner) Strategies S1.2.1A - Provide progressive ELV Lead Center program management (budget and project oversight) as required by NPG 7120.5 to maximize probability of mission success at minimum cost (B. Bruckner/S. Francois) S1.2.2A - Acquire and manage commercial launch services, consistent with law, policy and emerging commercial business terms and conditions that meet customer requirements (B. Bruckner/S. Francois/J. Hattaway) S1.2.3A - Provide technical management of commercial launch services, including superior vehicle integration and launch day support, that provides customers with world class launch services with probability of mission success at or above 95% (B. Bruckner/S. Francois)</p>	<p>Objective 1.1B Enable Safe, Low Cost Launches of Space Vehicles Strategies S1.1.1B – Recognized leader in launch, landing and payload processing management expertise S1.1.1.1B - Evolve facilities to multi-program use S1.1.1.2B - Enable commercial success for shuttle and ELV S1.1.2B - Provide world leadership in safety and mission assurance</p> <p>Objective 1.2B Enable Safe, Reliable, Cost Effective Processing of ISS Strategies S1.2.1B - Commercial utilization of ISS S1.2.1.1B - Transition to contractor S1.2.1.2B - Develop insight role S1.2.1.3B - Monitor performance S1.2.2B - Improve ISS processes, reduce cycle time S1.2.3B - Implement on-orbit logistical concepts for ISS</p>	<p>Objective 1.1C Enable Safe, Low Cost Launches of Space Vehicles Strategies S1.1.1C - Recognized leader in launch processing and management expertise S1.1.2C - Provide world leadership in safety and mission assurance concepts</p> <p>Objective 1.2C Enable Safe, Reliable, Cost Effective Processing of ISS Strategies S1.2.1C - Provide world leadership in operations for ISS logistical missions are safe, efficient, and effective</p>

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<p>Objective 1.3A Provide customers with optimal value payload carrier and services which incorporate “mission success first” actions and minimize cost (B. Bruckner) S1.3.1A - Provide progressive Payload Carrier Lead Center program management (budget and project oversight) as required by NPG 7120.5 to maximize probability of mission success at minimum cost (B. Bruckner/S. Francois) S1.3.2A - Provide broad technical expertise for operations and for payload carrier upgrades and provide associated flight and ground hardware for a wide variety of spacecraft and space experiment payloads (B. Bruckner/S. Francois)</p> <p>Objective 1.4A Provide Safe, Reliable, Cost Effective Processing of ISS and Shuttle payloads to increase the probability of mission success (T. Talone) Strategies S1.4.1A - Assure ISS assembly flight elements are safely and effectively planned, processed, tested and verified from integration through launch (T. Talone) S1.4.2A - Assure safe, effective and efficient processing of Shuttle payloads (T. Talone) S1.4.3A - Assure effective implementation of ISS logistics missions (T. Talone) S1.4.4A - Provide ISS and Shuttle payloads launch site processing improvements (T. Talone) S1.4.5A - Increase integration efficiency for ISS customer experiments (T. Talone) S1.4.6A - Lead and implement ISS ground systems enhancements/upgrades (T. Talone/K. Payne)</p> <p>Objective 1.5A Improve and synergize KSC’s operational systems, processes and performance (J. Jennings) Strategies S1.5.1A - Develop and deploy new, innovative safety and mission assurance concepts (S. Bartell) S1.5.2A - Provide highly effective engineering and laboratory services in support of the Programs (K. Payne)</p>	<p><i>Under Review</i></p>	

Goal 2.0 Increase the use of KSC's operational and development expertise to contribute to the design and development of future space transportation systems

<p>Define Our Future (A) 2000-2005</p>	<p>Expand Our Horizon (B) 2006-2011</p>	<p>Develop the Frontier (C) 2012-2025</p>
<p>Objective 2.1A Focus KSC capabilities to provide customers with superior engineering and development products and services that meet cost, schedule and performance requirements (K. Payne) S2.1.1A – Develop an integrated KSC spaceport technology plan aligned with Agency priorities (R. Bridges/K. Payne) S2.1.2A - Concentrate expertise in development roles associated with core competencies (K. Payne) S2.1.3A - Augment laboratory and testbed capabilities to support development capabilities and make available as a resource to our partners (K. Payne)</p> <p>Objective 2.2A Apply KSC expertise in NASA's efforts to improve advanced space transportation systems (K. Payne) S2.2.1A - Cultivate funded partnerships to support future space transportation programs (K. Payne/J. Morgan) S2.2.2A - Develop range capabilities and technologies to enhance future launch site operations (K. Payne) S2.2.3A - Provide KSC operational expertise in the program formulation phase of future space systems (K. Payne/D. King/T. Talone/B. Bruckner) S2.2.4A - Establish and implement KSC's role in the Integrated Space Transportation Plan for providing technology development and operational consulting (K. Payne/J. Morgan)</p> <p>Objective 2.3A Improve KSC's launch site capabilities to attract and accommodate future space transportation elements (K. Payne) Strategies S2.3.1A - Develop the capability to fly technology test beds flights from KSC (W. Wiley) S2.3.2A - Enable the basing of next generation Reusable Launch Vehicles at KSC (W. Wiley) S2.3.3A - Build and activate the Space Experiments Research and Processing Laboratory to conduct life sciences research and development efforts (K. Payne/T. Talone/C. Fairey)</p>	<p>Objective 2.1B Enable the Reduction of Transportation Costs to low-Earth Orbit by an Order of Magnitude (\$10,000 to \$1,000 per lb.) Strategies S2.1.1B - Develop innovative booster facilities & operations concepts S2.1.2B - Perform research and development to reduce the cost of processing and launch of vehicles by an order of magnitude (e.g., advanced vehicle health monitoring systems, Smart GSE, and flexible test sets) S2.1.3B - Utilize and advance KSC capabilities for test, processing, and launch of future vehicles, including pathfinder and small size launchers</p> <p>Objective 2.2B Provide Agency Leadership in Safe, Efficient Testing and Processing of Payloads Strategies S2.2.1B - Enhance carrier capabilities to meet new customer initiatives S2.2.2B - Advance KSC capabilities for payload customers S2.2.3B - Provide rapid cycle approach for new payload process from design concept to launch S2.2.4B - Provide the capability to perform functional and interface operational check-out for ISS payloads</p>	<p>Objective 2.1C Enable the Reduction of Transportation Costs to low-Earth Orbit by an Order of Magnitude (\$1,000 to \$100's per lb.) Strategies S2.1.2C - Utilize and advance KSC capabilities for the launch and processing of future vehicles S2.1.3C - Perform research and development to reduce the cost of processing of vehicles by an order of magnitude S2.1.4C - Provide highly adaptive and flexible launch environment to customers</p> <p>Objective 2.2C Push the Technology Edge of Payload Testing and Processing Strategies S2.2.1C - Develop new processing technologies for new payloads S2.2.2C - Advance KSC capabilities for payload customers</p>

Under Review

Goal 3.0 Develop new technologies for future space exploration by utilizing KSC operational expertise in partnership with other entities (Centers, industry, academia)

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<p>Objective 3.1A Explore and Define KSC Roles in Exploration (J. Morgan) Strategies S3.1.1A - Identify and invest in new technologies where KSC expertise can be applied in alignment with NASA exploration goals (J. Morgan/K.Payne) S3.1.2A - Design, prototype and test concepts, capabilities and technologies to be applied to human and robotic exploration missions (K. Payne) S3.1.3A - Perform operations and logistics assessments for exploration mission studies (J. Morgan) S3.1.4A - Develop life sciences, biological, medical and environmental technology in support of NASA exploration goals (K. Payne/ C. Fairey)</p>	<p>Objective 3.1B Provide Capability for Moon/Mars Initiatives Strategies S3.1.1B - Provide launch base environment to process, test, and launch the Moon/Mars mission S3.1.2B - Follow up on partnership commitments to develop capabilities for Moon/Mars mission execution S3.1.3B - Develop operations logistics concepts for Moon/Mars initiatives</p> <p>Objective 3.2B KSC Operations Knowledge and Expertise is an Integral Part of Space Vehicle Design Process Strategies S3.2.1B - Partner with space transportation developers to provide unique KSC expertise for the design, assembly and checkout phases of flight hardware</p>	<p>Objective 3.1C Assure KSC Provides a Significant Contribution to the Moon/Mars & Beyond Missions Strategies S3.1.1C - Develop techniques to support human missions for further solar system exploration S3.1.2C - Partner design of space systems for travel to Mars & beyond S3.1.3C - Provide long-term Moon/Mars operations logistics</p> <p>Objective 3.2C Apply KSC Operations Knowledge & Expertise to Beyond Earth Designs and Operations Strategies S3.2.1C - Provide/partner earth base operations, solutions and expertise to space based crew and mission management S3.2.2C - Provide/partner advanced development for return facilities and capabilities for crew and samples</p>

Under Review

Goal 4.0 Continually enhance core capabilities (people, facilities, equipment and systems) to meet NASA objectives and customer needs

Define Our Future (A) 2000-2005	Expand Our Horizon (B) 2006-2011	Develop the Frontier (C) 2012-2025
<p>Objective 4.1A Develop and implement systems and approaches to attract, develop and retain a high quality, diverse workforce to meet current and future challenges (R. Arbuthnot)</p> <p>Strategies S4.1.1A - Design and implement an expansive recruiting program for KSC which addresses critical hire areas with a high quality and diversified workforce (R. Arbuthnot) S4.1.2A - Create and implement cutting-edge training and development for employees (R. Arbuthnot) S4.1.3A - Enhance employees' quality of work life through challenging and rewarding work assignments and the application of meaningful recognition and incentive approaches to allow employees to reach their full potential (R. Arbuthnot) S4.1.4A - Develop and deploy competency assessment and analysis tools to determine existing competency levels, quantify projected competency needs and perform specific skill gap analyses (R. Arbuthnot) S4.1.5A - Develop and implement systems and approaches for a timely, effective, integrated and responsive Knowledge Management program for the purpose of capturing and sharing knowledge/information (R. Arbuthnot)</p> <p>Objective 4.2A Strengthen KSC's safety, health, security and environmental stewardship (R. Bridges)</p> <p>Strategies S4.2.1A - Improve our safety performance (S. Bartell) S4.2.2A - Improve the health of the KSC workforce (I. Long) S4.2.3A - Achieve OSHA Voluntary Protection Program certification (C. Fairey) S4.2.4A - Improve IT and physical security (C. Fairey) S4.2.5A - Implement energy reduction, pollution prevention, and environmental protection initiatives which exceed external expectations (C. Fairey)</p>	<p>Objective 4.1B Recognized as Most Customer Friendly Launch Center in World</p> <p>Strategies S4.1.1B - Further consolidate KSC, CCAS, PAFB & Eastern Test Range processes S4.1.2B - Measure customer satisfaction to target further development and improvements</p> <p>Objective 4.2B Recognized Leadership in Core Capabilities</p> <p>Strategies S4.2.1B - Enthusiastic assistance to space related operations of launches S4.2.2B - Continually concentrate on maintaining core capabilities at the leading edge of technology</p> <p>Objective 4.3B Build on the Established Leadership Position to Remain World-Class</p> <p>Strategies S4.3.1B - Continue to measure customer satisfaction and benchmark to target further development and improvement of enabling functions</p>	<p>Objective 4.1C Continue to Seize Opportunities to Improve & Expand Customer Relations</p> <p>Strategies S4.1.1C - Partner in managing Eastern Launch Site as a multi-purpose spaceport S4.1.2C - Measure customer satisfaction to target further development and improvements</p> <p>Objective 4.2C Provide Core Capabilities to a Space-</p> <p>Strategies S4.2.1C - Continually concentrate on maintaining core capabilities at the leading edge of technology</p> <p>Objective 4.3C Build on the Established Leadership Position to Become World-Class</p> <p>Strategies S4.3.1C - Continue to measure customer satisfaction and benchmark to target further development and improvement of enabling functions</p>

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<p>Objective 4.3A Maximize external customer satisfaction, attract new customers and build partnerships to solidify KSC's role as the spaceport technology center (J. Morgan) Strategies S4.3.1A - Measure customer satisfaction to target areas for further development and improvements (J. Morgan) S4.3.2A - Increase awareness, understanding, appreciation and support of KSC and NASA programs and goals (J. Morgan) S4.3.3A - Increase faculty and student participation in consolidated education programs and university research to enhance learning experiences and partnerships with academia (J. Morgan) S4.3.4A - Create new partnerships with other Centers, Agencies, industry and other government entities (J. Morgan) S4.3.5A - Increase industry/institution use of KSC capabilities through focused business development (J. Morgan) S4.3.6A - Increase industry, government and academia participation in NASA technology development and commercialization initiatives (K. Payne/J. Morgan)</p> <p>Objective 4.4A Align KSC's infrastructure with Agency and National priorities (J. Jennings) Strategies S4.4.1A - Develop a consolidated comprehensive master plan for land and facilities use (C. Fairey) S4.4.2A - Plan and implement reliable infrastructure to meet current and future customer needs and create a safer work environment (C. Fairey/D. King/B. Bruckner/T. Talone) S4.4.3A - Further develop the Cape Canaveral Spaceport, to include the Space Commerce Park (M. Jones/C. Fairey/J. Morgan)</p> <p>Objective 4.5A Enhance KSC's business practices to improve performance in accomplishing our Center mission (J. Jennings) Strategies S4.5.1A - Develop and implement an Integrated Management System which links business management processes and documentation (S. Bartell) S4.5.2A - Improve program/project management performance by developing and utilizing innovative tools and techniques throughout the organization (S. Bartell/K. Payne) S4.5.5A - Enhance KSC's procurement, finance, legal and human resource systems/practices (J. Hattaway/ N. Carroll/B. Anderson/R. Arbuthnot) S4.5.6A - Improve internal customer relationships and communications processes (J. Morgan)</p>	<p><i>Under Review</i></p>	